Question Paper
ANMC Mock Test Class 7 - Algebra (Paper 4)

Exam ID : TEST/2024/01/05134453 Report Generation Date : 3/26/2024 3:02:23 PM

Q1: If a – 3b = 2, then the value of (a3 - 27b3 - 18ab) is:

A: 6

B: 8

C: 9

D: 7

Answer: B

Q2: If a = 26, b = 27 and c = 29 then find a3 + b3 + c3 - 3abc.

A: 536

B: 438

C: 648

D: 574

Answer: D

Q3: If (a-b) = 4, (b-c) = 7 and (c-a) = 3 then the value of (a3+b3+c3-3abc)/(a+b+c) is:

A: 37

B: 74

C: 46

D: 84

Answer: A

Q4: If a + b + c = 4 and a2 + b2 + c2 = 10 and 1/a + 1/b + 1/c = 1 then find abc.

A: 5

B: 3

C: 4

D: 6

Answer: B

Q5: If a + b + c = 8, ab + bc + ca = 24, a3 + b3 = 67, b3 + c3 = 70 and c3 + a3 = 43 then what is the value of 3abc?

A: 154

B: 84

C: 230

D: 63

Answer: A

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Q6: If x = (0.04)2, y = 1/(0.04)2 and z = (1 - 0.04)2, then out of the following, the true relation is:

A: y < x < z

B: z < x < y

C: x < z < y

D: y < z < x

Answer: C

Q7: If x + 1/x = 3 then the value of x12 + 1/x12 is:

A: 104520

B: 103682

C: 100235

D: 15432

Answer: B

Q8: If x + 1/x = 3 then the value of (x2 + 8x + 1)/(x2 + 5x + 1) is:

A: 8/11

B: 8/5

C: 11/8

D: 5/8

Answer: C

Q9: If a3 - b3 = 35 and a - b = 5, then the value of (a2 + b2 + ab) is:

A: 7

B: 40

C: 30

D: 12

Answer: A

Q10: If x + 1/x = -2 then the value of (x2 + x + 1)/(x2 - 6x + 1) is:

A: 3/8

B: 1/8

C: 5/8

D: 7/8

Answer: B

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Q11: If 18% of(x - 3) = 0.36 then the value of x is:

A: 3

B: 1

C: 6

D: 5

Answer: D

Q12: If x2 - (1/3)x - 1 = 0, then find x3 - 1/x3

A: 27/28

B: 28/27

C: 29/26

D: 26/29

Answer: B

Q13: If 3x + 1/4x = 15 then find the value of 16x2 + 1/9x2

A: 1190/3

B: 1192/3

C: 1195/3

D: 1194/3

Answer: B

Q14: If 1 – 512x3 – 24x + (184 + a)x2 = (1 – ax)3 then find the value of a.

A: 64

B: 6

C: 8

D: 16

Answer: C

Q15: If [16(2)1/2 x3 + 81(3)1/2 y3] ÷ [2(2)1/2 x + 3(3)1/2 y] = (Ax2 + By2 + Cxy) then find the value of 5A - 3B - C(6)1/2

A: 8

B: -5

C: -2

D: 6

Answer: B

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Q16: If x + y = 12 and xy = 10 then find the value of 1/x2 + 1/y2

A: 1.20

B: 1.32

C: 1.28

D: 1.24

Answer: D

Q17: If x + 1/x = 5 then find the value of x3 + 1/x3 – 100

A: 10

B: 12

C: 8

D: 6

Answer: A

Q18: If 3x – 3/x = 7 then find the value of x3 – 1/x3 – (343/27)

A: 0

B: 7/3

C: 7

D: 3

Answer: C

Q19: If a2 + b2 + c2 = 2(2a - b - 2c - 4) -1, then the value of (a - b + c + 2) is:

A: 1

B: 4

C: -1

D: 3

Answer: D

Q20: If x + 1/x = 3 then find the value of x3 – 1/x3 – 8×(5)1/2

A: –1

B: 2

C: 0

D: 1

Answer: C

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Q21: If 3x2 – x + 1 = 0 then find the value of 9x2 + (1/x)2:

A: 9

B: – 5

C: 6

D: – 4

Answer: B

Q22: Simplify: (a + 2b – c – d)2 – (3a – b + c – d)2 + 8a2 – 3b2 – 10ab + 2bc – 4cd + 8ac – 4ad + 6bd

A: 1

B: 2

C: 0

D: 4

Answer: C

Q23: If a – 3b = –3, then the value of (a3 – 27b3 + 27ab) is:

A: 27

B: – 24

C: 24

D: – 27

Answer: D

Q24: If (a – b) = 3, (b – c) = 6 and (c – a) = – 9 then the value of:
(a3+b3+c3 – 3abc)/(a+b+c) is:

A: 51

B: 74

C: 63

D: 78

Answer: C

Q25: If a + b + c = 6 and a2 + b2 + c2 = 12 and 1/a + 1/b + 1/c = 2 then find 5abc.

A: 25

B: 40

C: 20

D: 30

Answer: D

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Q26: If (x – y) = 8 then what is the value of (x – 15)3– (y – 7)3?

A: 0

B: 1

C: 4

D: 9

Answer: A

Q27: If x + 1/x = 3 then the value of (x2–3x+1)/(x2+5x+1) is:

A: 1

B: 0

C: 2

D: 1.5

Answer: B

Q28: If a = 3 + 81/2 then the value of a2 + 1/a2 – 30 is:

A: 5

B: 2

C: 3

D: 4

Answer: D

Q29: If a3 – b3 = 48 and a – b = 6, then the value of (a2+b2+ab) is:

A: 12

B: 8

C: 10

D: 7

Answer: B

Q30: If a = 156, b = 160 and c = 150 then find a3+b3+c3–3abc.

A: 35402

B: 35424

C: 35420

D: 35416

Answer: D

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